

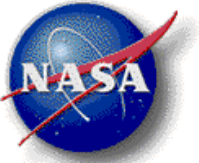
Battery Standards

The Need?

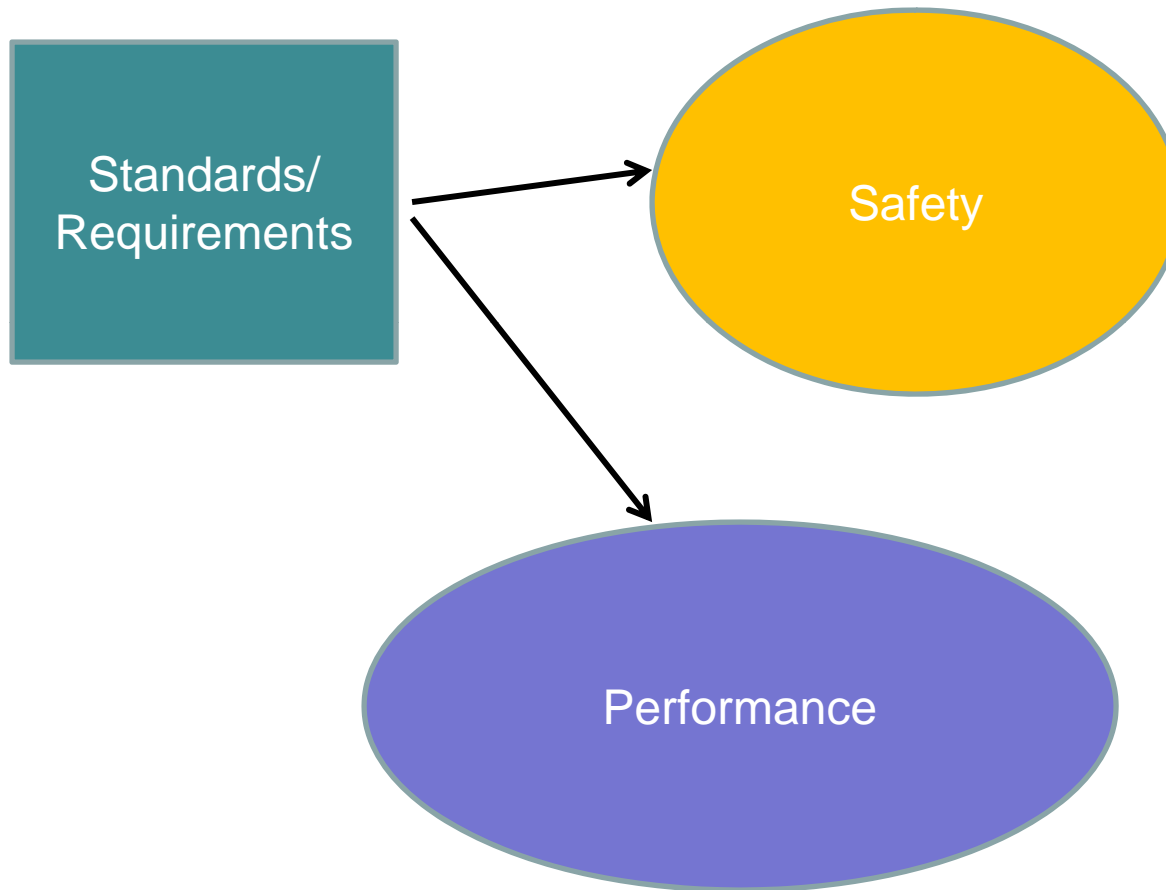
J. Jeevarajan, M. Martinez
NASA-JSC

Space Power Workshop
April, 2011

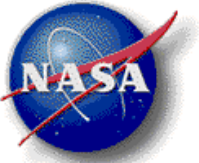
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Types of Standards



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Need for Battery Standards



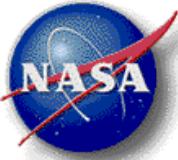
Vendor needs to understand the minimum requirements for a mission / application (performance and safety)

Vendor needs to be able to plan a schedule and estimate cost based on a certain set of minimum requirements

Vendor needs clear pass/fail criteria to be able to show that their battery can meet performance and safety mission requirements

Vendor needs to know of any unique requirements to be able to choose the right battery chemistry and optimum design

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Issues due to Lack of Battery Standards



Do not have
any
requirements
to meet

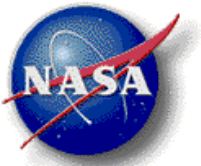


Misinterpretation of
requirements -
Margin of safety or
performance for one
team may not be the
same for another?

No requirements for
accountability/
responsibility
-may be responsibility
of owner to carry out
delta work to meet
actual requirements

Knowledge and
Technical Expertise not
used cost-effectively
Leads to Cost and
Schedule impact

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Need for Multiple (Plethora of) Standards?



Underwriter's
Laboratory
(UL)

International
Electrotechnical
Commission/
American National
Standards Institute
(IEC/ANSI)

Navy

NASA

Society of Automobile
Engineers (SAE)

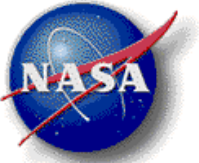
Air Force
(Range Safety)

Military Std.
(relevancy for
batteries
although not
specifically)

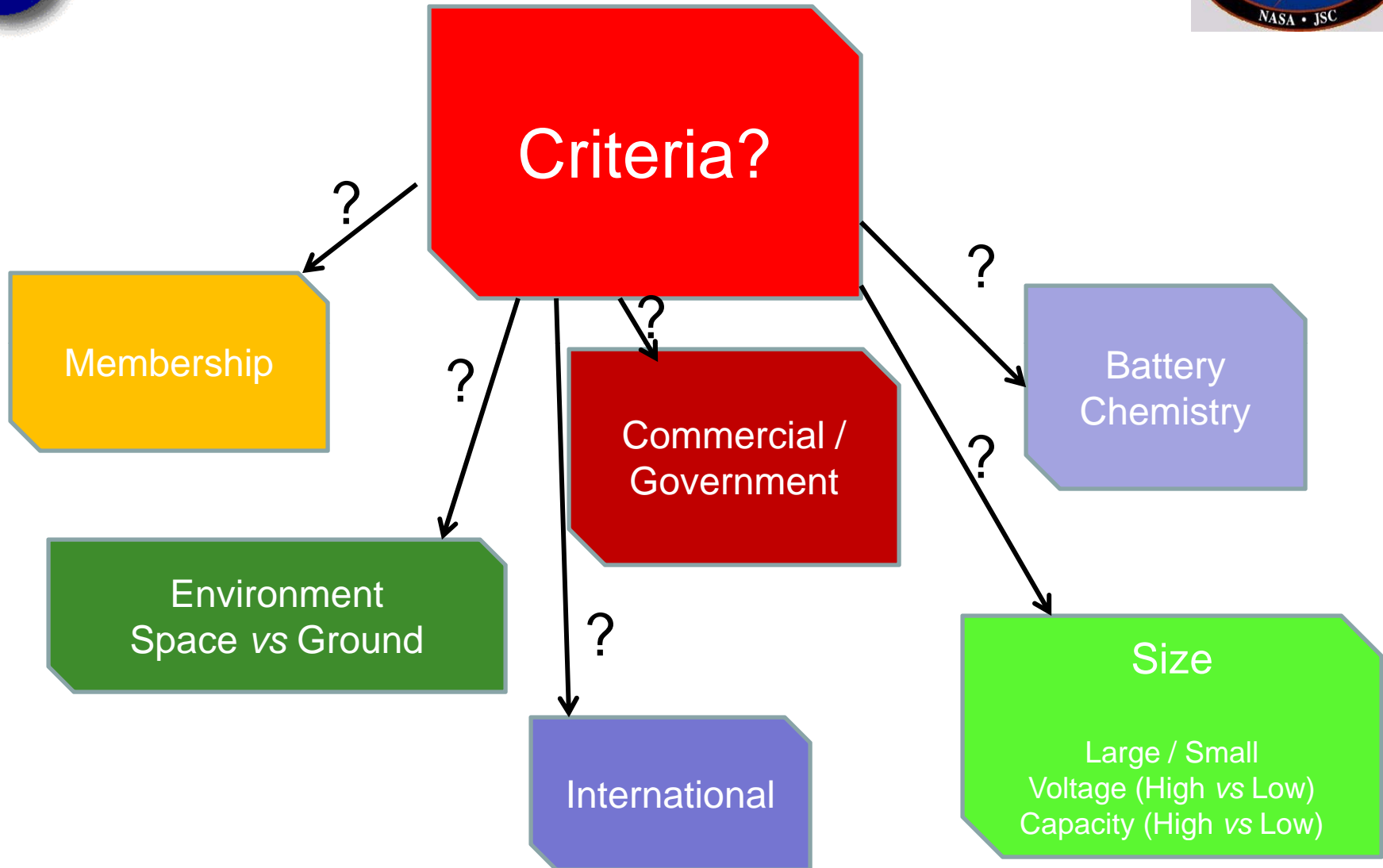
European
Standards

Battery
Association of
Japan (BAJ)

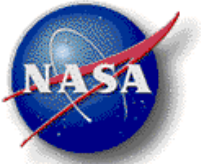
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Set of Common Standards?



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Open Discussion



Topics to be addressed:

1. Need
2. Participation/membership
3. Application/Unique environment

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